



Foton-M3

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Gecko-F2 Segei V. Savelyev of the Institute of Human Morphology, Moscow, and Eduardo A.C. Almeida of NASA ARC
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Support Team: Lockheed Martin Engineering and Sciences Co.

Objective:

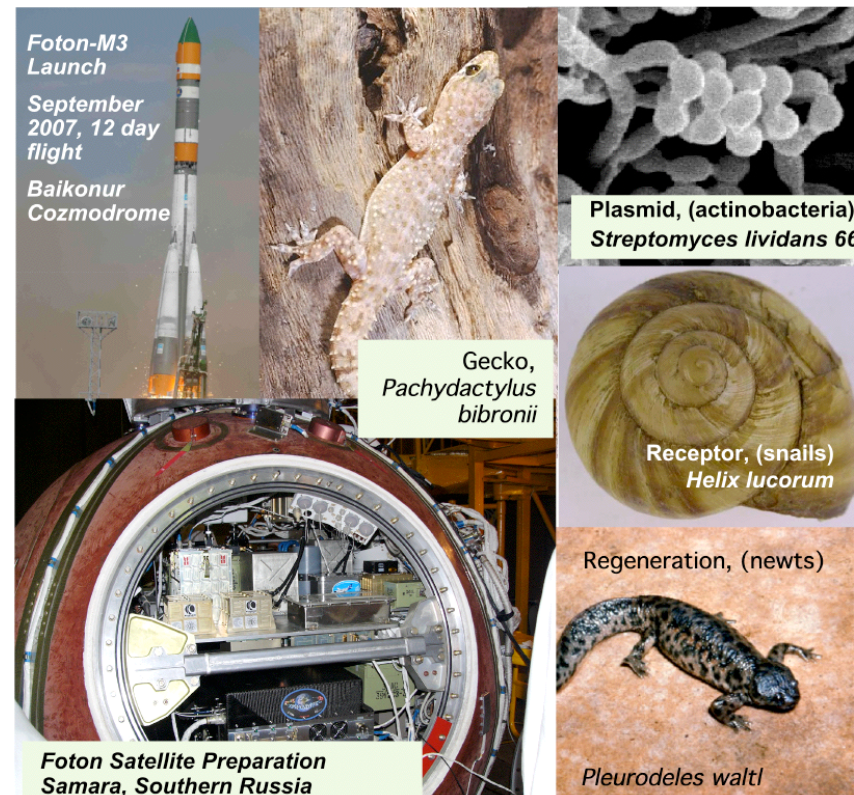
- ♦ Take maximum advantage of a unique research opportunity on the Russian Foton-M3 spaceflight
- ♦ Maintain existing relationships with IMBP, Roscosmos, and the rocket and satellite manufacturer (TsSKB Progress, Samara)
- ♦ Participate in ongoing Russian experiments (already funded and manifested)
- ♦ Foton-M3 flight is a low cost opportunity to confirm results, improve research techniques, and expand the areas of inquiry based on the Foton-M2 results. The Foton-M3 data will help validate the results of NASA's Foton-M2 investigations.

Relevance/Impact:

- ♦ Foton-M2 produced data on genetic structures, genetic stability, molecular-biological mechanisms of cell proliferation, tissue regeneration, and the effect of microgravity on the electro-physiology of gravity sensing. Fundamental space biology studies such as those related to Foton-M2 and Foton-M3 advance human knowledge of the effects gravity has had, and continues to have, on all terrestrial life.
- ♦ For a small investment of its resources, Foton-M3 activity is helping NASA maintain and sustain U.S. space life sciences' capabilities. The mission provides a low cost opportunity that enables the U.S. to maintain ties to the Russian animal/human space research community and keep open the future possibility for more robust animal research on the Bion spacecraft. Participation in this mission will enable the U.S. to sustain a core intramural and extramural competency in space life sciences research and a long standing and productive international science collaboration with Russia

Development Approach & Outcome:

- ♦ Established a contractual arrangement with Russia to allow continued basic biology research collaborations between the Institute for Biomedical Problems (IBMP) and NASA
- ♦ Foton-M3 mission September 14-26, 2007
- ♦ All samples returned in excellent condition, analysis is underway



Project Life Cycle Schedule

Milestones	Launch	Ops	Return	Final Report
Actual/ Baseline	Sept 14, 2007	Launch +/-1m	Sept 26. 2007	Sept 2008